

REMARKS/ARGUMENTS

Status of the Application

Claims 1-4, 7-21 and 23-25 are pending in the present application. Of these:

- Claim 24 stands rejected under 35 USC 102(b) as anticipated by Thompson.
- Claims 1-4 and 7-23 stand rejected as obvious over Thompson in view of Wong.
- Claims 5, 6, and 22 are cancelled by this amendment.
- Claim 25 is new.

Rejections under 35 USC 103(a)

Certain Initial Matters - Claims 5, 6, 7, 11, 12, 13, 14, 20, 21, and 22

The subject Office Action does not establish a *prima facie* case of obviousness because it does not identify which features of the prior art correspond to the claimed elements and limitations of at least claims 5, 6, 7, 11, 12, 13, 14, 20, 21, and 22. To meet the burden of establishing a *prima facie* case, the Office must explain how the limitations of the rejected claims are met by pointing out where the specific limitations of the claims are found in the prior art. *Ex Parte Naoya Isoda*, Appeal No. 2005-2289, Application 10/064,508 (Bd. Pat. App. & Inter.2005). The goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity. (MPEP §706). The pertinence of each reference, if not apparent, must be clearly explained and each rejected claim specified. (37 C.F.R. §1.104(c)(2)). Applicant requests specific identification of each feature or element in the cited references which is deemed to correspond to the claimed elements and limitations, and if possible the location in the cited reference where the relevant feature or element is discussed.

Claim 1

Claim 1 has been amended to include the limitations of former dependent claims 5 and 6. Claim 1 requires, among other things:

- a radiation opaque shield;
- a subject support means that supports the subject in the aperture, the subject support means including:
 - a top surface on which the subject is positioned;
 - a bottom surface opposing the first surface and having a shape.
- wherein at least one shield defines a bottom boundary of the aperture disposed underneath the support means, which bottom boundary conforms to the shape of the bottom surface.

It is submitted that Wong and Thompson fail to establish a *prima facie* case of obviousness with respect to claim 1.

First, Wong does not disclose a subject support as required by claim 1. Second, Wong does not disclose a radiation opaque shield defining an aperture that conforms to the shape of the bottom surface of a subject support.

This deficiency is not cured by Thompson. While Thompson discloses a couch 16, its radiation shield 14 does not define an aperture that conforms to the shape of the bottom surface of a subject support. Instead, and as can be seen at Thompson Figure 9, the shield 14 conforms to the size and shape of the scanner's bore. Nor is this limitation disclosed at the other portion of Thompson cited in the Office Action (*i.e.*, paragraph [0005]).

Claim 7

Claim 7, which depends from claim 1, requires:

- that the subject support means is vertically adjustable;
- no substantial air gap is defined between the aperture boundary and the bottom surface of the subject support means when the support means is in a lower most position.

Neither of these limitations is disclosed by Wong or Thompson, nor does the Office Action even so allege.

As the Office Action fails to establish a *prima facie* case of obviousness, the present rejection should be withdrawn.

Claim 11

Claim 11, which depends from claim 9, requires that the aperture side boundaries include linear vertical surfaces, which conform to a path of vertical travel of the side surfaces of the subject support means and the subject.

This limitation is not disclosed by Wong or Thompson, nor does the Office Action even so allege.

Wong does not disclose in the first instance the claimed subject support means. It also does not disclose a shield that defines an aperture having side boundaries that include linear vertical surfaces, or that the linear surface conforms to a path of vertical travel of the side surfaces of the subject support means.

These deficiencies are also not cured by Thompson. First, Thompson provides no indication that that its couch 16 is characterized by a path of vertical travel. As can be seen from Thompson Figure 9, the shield 14 fits inside the bore of the scanner. Such an arrangement would of course *preclude* vertical travel. Moreover, the side boundaries of Thompson's shield 14 would not in any case conform to a path of vertical travel of the side surfaces of the couch 16.

As the Office Action fails to establish a *prima facie* case of obviousness, the present rejection should be withdrawn.

Claim 12

Claim 12, which depends from claim 11, requires that there is no substantial air gap between each side boundary of the aperture and an associated side surface of the subject support means.

This limitation is not disclosed by Wong or Thompson, nor does the Office Action even so allege.

As the Office Action fails to establish a *prima facie* case of obviousness, the present rejection should be withdrawn.

Claim 14

Claim 14, which depends from claim 9, requires that

- the bottom boundary of the aperture is substantially parallel to the bottom surface of the subject support means;
- each side boundary of the aperture is substantially parallel to an associated side surface of the subject support means.

Neither of these limitations is disclosed by Wong or Thompson, nor does the Office Action even so allege.

As the Office Action fails to establish a *prima facie* case of obviousness, the present rejection should be withdrawn.

Claim 17

Amended independent claim 17 is directed to a method that requires that:

- the shield defines an aperture that includes inwardly facing first and second side boundaries that face corresponding outwardly first and second sides of a subject support that supports the subject in the bore;
- there is no substantial air gap between each side boundary of the aperture and the corresponding side of the subject support.

As noted above with respect to claims 11 and 12, Wong fails to disclose the claimed support means, let alone the claimed no substantial gap between the side boundaries and the sides of the support.

These deficiencies are not cured by Thompson. As can be seen from Thompson Figure 9, Thompson fails to disclose either a shield defining an aperture that includes the claimed side boundaries or the claimed no substantial air gap between the side boundaries and the sides of the support.

Claim 18

Independent claim 18 has been amended to include certain aspects of former claim 22. Claim 18 now requires that:

- the radiographic scanner includes a subject support, which supports the subject in the bore;
- the subject support moves vertically to raise and lower the subject in the bore;
- the method further includes shaping a pair of opposing side boundaries of the aperture with linear and vertical regions to accommodate vertical movement of the subject support.

These limitations are not disclosed by Wong or Thompson, nor does the Office Action even so allege.

Wong does not disclose in the first instance the claimed subject support means, let alone one that moves vertically. It also does not disclose shaping a pair of opposing side boundaries of the aperture with linear and vertical regions to accommodate vertical movement of the subject support.

These deficiencies are also not cured by Thompson. First, Thompson provides no indication that that its couch 16 moves vertically to raise and lower the subject in the bore. As can be seen from Thompson Figure 9, the shield 14 fits inside the bore of the scanner. Such an arrangement would of course *preclude* vertical travel. Moreover, Thompson does not disclose shaping a pair of opposing side boundaries of the aperture of a radiation shield with linear and vertical regions to accommodate vertical movement of the subject support. In this regard, applicant points out that the open region in the center of Thompson's shield 14 accommodates ingress and egress of the patient, not vertical movement of the subject support.

As the Office Action fails to establish a *prima facie* case of obviousness, the present rejection should be withdrawn.

Claim 20

Claim 20, which depends from claim 18, requires that:

- the subject support moves the subject longitudinally into and out of the bore through the non-circular aperture
- the method further includes shaping a bottom boundary of the non-circular aperture to conform to a shape of a bottom surface of the subject support.

The remarks above with respect to claim 1 apply *mutatis mutandis* to claim 20. As the Office Action fails to establish a *prima facie* case of obviousness, the present rejection should be withdrawn.

Rejection Under 35 USC 102(b)

Claim 24

Claim 24 stands rejected as anticipated by Thompson. As amended, claim 24 now requires among other things:

- a subject support that supports a subject in the imaging region, wherein the subject support includes:
 - a upper surface that supports the subject;
 - a lower surface opposite the upper surface and having a shape,
- that the aperture includes an upper portion that faces the upper surface and a lower portion that faces the lower surface, the shape of the lower portion conforms to the shape of the lower surface, and the shape of the upper portion has a shape that is different from the shape of the lower surface.

The remarks above with respect to claim 1 apply *mutatis mutandis* to claim 24.

Claim 25

It is submitted that new claim 25 is amply supported by the application as filed and distinguishes patentably and non-obviously over the prior art of record.

Other Claims

It is submitted that those claims not addressed specifically above are directed to allowable subject matter at least by virtue of their dependencies from their respective base claims.

Conclusion

In view of the foregoing, it is submitted that claims 1-4, 7-21 and 23-25 distinguish patentably and non-obviously over the prior art of record. An early indication of allowability is earnestly solicited.

Respectfully submitted,
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